ABSTRACT

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A prism sheet having a concave pentagonal structure is disclosed. The prism sheet comprises a base layer, and a prism array disposed on and supported by the base layer. The prism array is composed of a plurality of prisms aligned in parallel and one beside the other. The transversal cross-section of each prism has a shape of concave pentagon, which is symmetrical about a vertical line passing the apex. The interior angle α of the apex is $30^{\circ} \le \alpha \le 120^{\circ}$, the exterior angle β formed by the upper slant side and the lower slant side is $\beta < 180^{\circ}$, the interior angle γ of the lower vertex formed by the lower slant side and the base is $5^{\circ} \le \gamma \le 85^{\circ}$ and the length w of the base is $30\mu m \le w \le 100\mu m$. Preferably, the interior angle α of the apex may be $40^{\circ} \le \alpha \le 100^{\circ}$, the exterior angle β formed by the upper slant side and the lower slant side may be $160^{\circ} \le \beta \le 179^{\circ}$, and the interior angle γ of the lower vertex formed by the lower slant side and the base may be $30^{\circ} \le \gamma \le 60^{\circ}$. Preferably, the length w of the base may be $40\mu m \le w \le 60\mu m$.